

HP StorageWorks Fabric Manager 4.4.x release notes

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Fabric Manager 4.4.x release notes

About this document

This document provides last-minute changes that may not be included in the *HP StorageWorks Fabric Manager Version 4.4.x User Guide*. It also contains workarounds for problems encountered during qualification.

This section identifies the audience for these *Release Notes* and provides high-level descriptions of the information it contains.

Intended audience

These *Release Notes* are intended for systems administrators and technicians who are responsible for installing, operating, and managing Fibre Channel SAN switches using Fabric Manager 4.4.x.

Technical support

Contact Hewlett-Packard support for hardware, firmware, and software support, including product repairs and parts ordering. To assist your support representative and to expedite your call, have the following information available when you call:

- Technical support contact number, if available
- Switch model
- Switch operating system version
- Error messages received
- Output from `supportshow` command
- Detailed problem description and specific questions
- Description of any troubleshooting steps already performed and results

Documentation

This section discusses documentation associated with the Fabric Manager 4.4.x.

Other Fabric Manager documentation

Additional documentation, including white papers and best practices documents, are available via the HP web site at: <http://www.hp.com>.



NOTE: HP has made every effort to provide you with the most up-to-date Web retrieval procedures available at time of print. Note, however, that Web page links and pointers are subject to change.

To access the technical documentation:

1. Locate the **Storage** section of the Web page.
2. Under **Networked storage**, locate the **by type** subsection.
3. Click **SAN infrastructure**. The **SAN infrastructure** page displays.
4. Locate the **Fibre Channel Switches** section.
5. Locate the **B-Series Fabric** subsection.
6. Click the appropriate switch that you will manage with Fabric Manager. The switch overview page displays.
7. Locate the **product information** section.
8. Click **technical documents**.
9. Select the applicable documents.

For information about Fibre Channel standards, visit the Fibre Channel Industry Association web site, at: <http://www.fibrechannel.org>.

Overview

Fabric Manager is a powerful application that manages multiple HP StorageWorks switches, routers, and fabrics in real time. Fabric Manager provides the essential functions for efficiently configuring, monitoring, dynamically provisioning, and managing HP SAN fabrics on a daily basis.

Through its single-point SAN management platform, Fabric Manager facilitates the global integration and execution of management tasks across multiple fabrics, thereby lowering the overall cost of SAN ownership. As a result, it provides a flexible and powerful tool, optimized to provide organizations with rapid access to critical SAN information.

Fabric Manager is tightly integrated with other HP SAN management products, such as Advanced Web Tools and Fabric Watch. Organizations can also use Fabric Manager with such other leading SAN and storage resource management applications as the drill-down element manager for single or multiple HP fabrics.

Fabric Manager summary

Fabric Manager provides users the ability to:

- Efficiently provision, monitor, and administer large numbers of switches and multiple HP SAN fabrics.
- Perform management tasks across multiple devices and fabrics as a single management operation.
- Intelligently group multiple HP switches or ports to facilitate aggregated management.
- Visualize and track changes to SAN configuration and state information through multiple views at multiple levels of detail.
- Launch Fabric Manager from other enterprise management applications, such as HP OpenView.
- Track SAN assets by using detailed table views that can be exported to a spreadsheet.
- Discover details about devices logged in to the fabric, including HBA asset information.
- View the SAN layout through a topology map that specifies ISL, switch, and device details.
- Identify, isolate, and manage SAN events across large numbers of switches and fabrics.

Fabric Manager 4.4.x Enhancements for this Release

The following section lists improvements to Fabric Manager 4.4.x.

New Product Support

HP introduces support for the HP StorageWorks SAN Switch 4/32.

New features in this release

- Performance Monitoring
 - End-to-End Performance Monitoring. Shows how much traffic a particular target/initiator is generating on the fabric over time. Identifies the devices that are creating the most traffic, and which ports are the most congested.
- Ports-On-Demand
 - Unlicensed ports for SAN Switch 4/32 displayed with different icon
- Scalability
 - 2560-port fabric now supported by Fabric Manager server
- Configuration and Support
 - Ability to set the admin password on multiple switches
 - Ability to import device-node/device-port names from CSV files
 - Ability to select HP StorageWorks MP Routers from multiple backbone fabrics during configuration
 - Ability to refresh switch/fabric data on demand
 - FDMI hostname support
 - Ability to capture Fabric Manager support information
 - ODBC driver automatically installed to easily assess Fabric Manager data from other applications
 - Long distance information and buffer states now supported in Ports view

System requirements - Windows environments

HP recommends that your machines have the following, if you are running client and server separately:

- Client: A 1.8 GHz CPU with a minimum 512 MB memory.
- Server: A 2.0 GHz P4 CPU with a minimum 768 MB memory.

Use the server requirements if you are running client and server on the same machine.

System requirements - Solaris environments

HP recommends following if you are running client and server separately:

- Client: An Ultra 30 400 MHz CPU with a minimum 768 MB memory.
- Server: An Ultra 60 450 MHz CPU with a minimum 2 GB memory.

Switch support

Fabric Manager 4.4.x supports the following devices:

- HP StorageWorks 1 GB switches
- HP StorageWorks 2 GB switches
- HP StorageWorks SAN Switch 4/32
- HP StorageWorks Core Switch 2/64
- HP StorageWorks SAN Director 2/128
- HP StorageWorks MP Router

Fabric Manager displays a description of the switch type in the At-A-Glance window in the Overview view. [Table 1](#) lists the HP switch types and their corresponding descriptions.

Table 1 Fabric Manager switch descriptions

HP switch	Fabric Manager description
Fibre Channel Storage Switch 8	1 Gbit 8-port entry switch
Fibre Channel Storage Switch 16	1 Gbit 16-port entry switch
StorageWorks SAN Switch 8	1 Gbit 8-port switch
StorageWorks SAN Switch 16	1 Gbit 16-port switch
HP StorageWorks SAN Switch 2/8-EL	2 Gbit 8-port switch
HP StorageWorks SAN Switch 2/8V	2 Gbit 8-port switch w/switch limit
HP StorageWorks SAN Switch 2/16	2 Gbit 16-port switch
HP StorageWorks SAN Switch 2/16V	2 Gbit 16-port switch w/switch limit

Table 1 Fabric Manager switch descriptions (continued)

HP switch	Fabric Manager description
HP StorageWorks SAN Switch 2/32	2Gbit 32-port switch
HP StorageWorks SAN Switch 4/32	4Gbit 32-port switch
HP StorageWorks Core Switch 2/64	2Gbit core fabric switch
HP StorageWorks SAN Director 2/128	2Gbit 128-port core fabric switch
HP StorageWorks MP Router	2GbitFC/ 1GbE 16-port Fabric
HP StorageWorks MSA SAN Switch 2/8	2Gbit 8-port embedded fabric switch

Host support

Fabric Manager 4.4.x supports the following hosts:

- Windows® 2003 Client and Server
- Windows XP Client and Server
- Windows 2000 Client and Server
- Windows NT® Client (no Server)
- Solaris 2.9 Client and Server
- Solaris 2.8 Client and Server
- Solaris 2.7 Client and Server

Installation

To upgrade your current Fabric Manager version to Fabric Manager v4.4.x, run the install program. The installer will launch the uninstaller and remove the earlier version. You can then install the new Fabric Manager software, version 4.4.x. Your configuration from the previous installation is migrated to the latest installation. Refer to the *HP StorageWorks Fabric Manager Version 4.4.x User Guide* for more information.

Windows (FM client and/or FM server)

1. Insert the Fabric Manager CD into the CD-ROM drive.

The CD auto-launches the Fabric Manager Installation Wizard. If the Fabric Manager Installation Wizard does not auto-launch, navigate to the Windows folder on your machine and run `Install.exe`.

2. Follow the instructions to complete the installation.

Solaris (FM client and/or FM server)

1. Insert the Fabric Manager CD into the CD-ROM drive.
2. Execute `Install.bin`.

Running Fabric Manager

Fabric Manager server runs as a service on Windows and is started automatically after installation.

1. Windows Fabric Manager client: Select **Start > Fabric Manager > Fabric Manager**.

Solaris Fabric Manager client: Navigate to the Fabric Manager install folder and execute `./startFabricManager`.

2. Enter your Username, password, IP address, and the port number of the Fabric Manager server, providing login authentication.
3. Enter the IP address or name of an HP StorageWorks switch in the address field to start managing your fabric.

Installation Notes

Read and consider the following information before installing Fabric Manager.

- If you are upgrading from a previous version of Fabric Manager, refer to the *HP StorageWorks Fabric Manager Version 4.4.x User Guide*.

Installing the Fabric Manager client: If you are installing Fabric Manager client over an existing installation of the Fabric Manager client (without first uninstalling the old version), the installation wizard does not check to see if there is an existing path specified for the Fabric Manager client during the installation. It just appends to the system path file, resulting in multiple paths.

Although multiple paths do not affect functionality, they could result in other applications being unable to add additional path names, since the length of the Fabric Manager client path is too great. If you see this problem, then manually edit the system path to include only one Fabric Manager client directory.

- If the Setup/Install GUI never comes up during install, run the DOS command `dxdiag` and make sure that the graphics tests run without error. If any DirectX files are missing or any diagnostics fail, go to the Microsoft® web site and upgrade to the latest version of DirectX.
- To find the domain name to use as the windows authentication domain, which must be specified during installation, open a DOS window and type `set`. The alias `USERDOMAIN` indicates the active domain. If the client and server are to reside on different Microsoft domains, both domains must have trusts established between them, or Fabric Manager cannot authenticate the client. You should know which domain your systems are in, or you should check with your IT department. Note also that this domain is not the internet domain (as in `corp.mycompany.com`); it is the domain name that Microsoft users for authentication.
- The client and server software poll different fabric information directly, so the client and server must be able to access each switch via an IP connection. Make sure that the network environment does not have any proxy server or firewall between the client and the server and the switches. If one exists, ensure that proper rules are set up to allow access.
- If you have problems installing on a Solaris system, you might be able to resolve them by making sure the recommended J2SE patches for Solaris Java™ applications is installed. These patches can be found at <http://sunsolve.sun.com/pub-cgi/show.pl?target=patches/patch-access>.

Use the appropriate patch for your version of Solaris. Issues might also be encountered when using XWindows emulators from Windows to access the Sun host.

- The Java Runtime Environment (JRE) used by Fabric Manager is embedded in the Fabric Manager install image and no separate Java installation is required. When Fabric Manager is installed, the JRE included in the Fabric Manager install image is installed in the directory where Fabric Manager is installed and is available for use only to Fabric Manager. The Fabric Manager JRE installation does not set or modify any Java-related environment variables or Windows registry entries. This JRE does not replace any other JRE installed on the system and does not conflict with any other JRE that may be installed on the system. The Fabric Manager JRE is not used by Advanced Web Tools. You can install or run any other application (including Advanced Web Tools) using a different JRE and it will neither conflict with the JRE included in Fabric Manager nor will the Fabric Manager JRE conflict with it. In other words, the JRE installed with Fabric Manager is entirely embedded

in Fabric Manager and used only by Fabric Manager. This version of Fabric Manager includes JRE version 1.4.2_03.

- Before installing, check to make sure the system has the latest video drivers installed (to be safe, you may want to upgrade to the latest DirectX drivers as well). Certain systems might crash with a Blue Screen or the setup GUI might not start up - caused by an interaction between Java, Microsoft DirectX drivers, and the video driver. The crash/GUI issues have been resolved by upgrading the mentioned drivers and DirectX to the latest versions. The following link takes you to the page from Sun that mentions the issue (search on “blue screen”): <http://java.sun.com/j2se/1.4.1/relnotes.html>.
- After the evaluation version is installed, users must upgrade to a licensed version within 60 days. After the time-out occurs, users are presented with a dialog that allows them to license the product.

Operating system support

Fabric Manager 4.4.x is recommended for all environments. [Table 2](#) summarizes the versions of HP hardware and software that are supported in conjunction with this release. Refer to the *HP StorageWorks SAN Design Reference Guide* for more information.

Table 2 Supported versions of hardware and software

Area	1GB Switches	SAN Switches 2/8-EL and 2/16	SAN Switch 2/32 and Core Switch 2/64	SAN Switch 2/8V, 2/16V, 2/16N, and SAN Director 2/128	SAN Switch 4/32	MP Router
Fabric Manager Compatibility (FM 4.x or later recommended)	FM 3.0.2c or later (not supported with Fabric OS later than v2.6.1)	FM 3.0.2c or later	FM 3.0.2c or later	FM 4.2.x or later	FM 4.4.x or later	FM 4.2.x or later

Important notes

Table 3 lists issues and workarounds associated with Fabric Manager 4.4.x.

Table 3 Issues and workarounds

Issue	Description and workaround
HBA firmware download	<p>Issue: Firmware download does not work for certain earlier and unsupported versions of HBA firmware, driver, and HBAnyware versions.</p> <p>Workaround: Use the latest versions of each (together) to correct this issue. The current version of Driver tested is v5-5.00a10-1 for Windows 2000 with firmware v3.90a7. The current version of HBAnyware is included with this driver package.</p>
Upgrading Fabric Manager	<p>Issue: If you try to install the Fabric Manager server immediately after you close the Fabric Manager client, the installer indicates that the port is in use. This happens because when you close a Fabric Manager client program, the Fabric Manager server takes about four minutes to free the connection port.</p> <p>Workaround: Wait about four to five minutes after closing all clients before installing the Fabric Manager server.</p>
Upgrading Fabric Manager	<p>Issue: If you are upgrading from Fabric Manager 4.0.x server only install to Fabric Manager 4.1.0 or later, you are asked to reenter your Fabric Manager serial number and license key to complete the install (see the workaround). However, if you are upgrading from Fabric Manager 4.1.0 server only install to Fabric Manager 4.1.1 or later, you are not asked to reenter your Fabric Manager serial number and license key.</p> <p>Workaround: Before attempting the install, open the currently installed Fabric Manager and click Help > Register to display the current serial number and license key. Note this information for use during the upgrade process.</p>
Changing Printers in Fabric Manager	<p>Issue: If you have multiple printers configured, selecting a non-default printer on the page setup dialog in Fabric Manager might crash the Fabric Manager client when you click OK. This occurs rarely on some Windows hosts.</p> <p>Workaround: To prevent the Fabric Manager client from crashing, do not change the printer from the page setup dialog. Change the printer either from the print dialog or change the default printer on Windows, close and relaunch the Fabric Manager client, and then print the selected views.</p>

Table 3 Issues and workarounds (continued)

Issue	Description and workaround
Database transaction log file and FM client/server log files	<p>Issue: Database transaction log file and FM client/server log files are never deleted or truncated. Depending on the size of your SAN, these files may continue to grow and take up disk space.</p> <p>Workaround: You can manually delete the older FM client/server log files. These files are in the following locations:</p> <p>FabricManager_InstallDir\server\server\log</p> <p>FabricManager_InstallDir\client\log</p> <p>The database transaction log file cannot be deleted. Ensure you have sufficient disk space.</p>
LSAN Info view	<p>Issue: LSAN info view retrieval fails when more than approximately 909 LSAN zones are present. LSAN info view generates error code-221.</p> <p>Workaround: Obtain information via CLI using the <code>lsanzoneshow</code>, <code>fcrproxydevshow</code>, and <code>fcrphydevshow</code> commands.</p>
Security Admin	<p>Issue: Error code -221 is returned if the fabric has recovered from an unstable (reconfiguring) state upon bringing up Security Admin.</p> <p>Workaround: Run Security Admin after fabric is in a completely stable state and has not reconfigured for over 10 minutes due to a CP failover or <code>switchDisable</code> or <code>switchEnable</code> event.</p>
Security Admin	<p>Issue: Security Admin returns error code -65 after removing members and activating FCS policy.</p> <p>Workaround: Select Save before activating sequentially when removing five or more members from an FCS policy list. This allows the database to commit the changes without timing difficulties.</p>
Timeout	<p>Issue: FM fails to timeout when it does not receive a response to its http request sent to the switch. Occurs only if the switch reboots or the web server restarts on the switch while Fabric Manager is waiting for a response to its http request.</p> <p>Workaround: The cursor changes to an hourglass, but FM is still responsive. User can close and restart FM to reset the cursor.</p>

Table 3 Issues and workarounds (continued)

Issue	Description and workaround
Device table	<p>Issue: The Device table and Device ports table views are missing entries that are connected to unmonitored switches.</p> <p>Workaround: If the unmonitored switches are B-Series switches, restore TCP/IP connectivity to those switches so that they are no longer unmonitored. If the unmonitored switch is an M-Series switch and part of an interop fabric, they can be viewed in the Name Server view, which can be launched via a right click menu on a fabric node.</p>
Supportshow switch failure	<p>Issue: At least one v3.x switch fails when running <code>SupportShow</code> against multiple switches.</p> <p>Workaround: Rerun <code>SupportShow</code> against the single failing switch.</p>
Version time stamp reset	<p>Issue: Merging two secure fabrics fails with version time stamp reset (error 3604).</p> <p>Workaround: Close the merge with Secure Fabric Wizard and run the merge again.</p>
Switch not shown in GUI	<p>Issue: In fabrics with approximately 20 or more switches, at least one switch in SwitchGroups is not shown in the GUI after core switches are enabled or disabled.</p> <p>Workaround: Exit and restart the client. Do not add the lost switches again, since the switches do exist in the switch group. They are not shown in the client until the client is restarted.</p>
Windows installer hang	<p>Issue: The Windows installer may hang while installing FM on a Windows machine.</p> <p>Workaround: Run the installer with the command line option <code>install.exe - DREFRESH_ENV=false</code>. Reboot your machine when the installer completes.</p>
Empty fabric in FM tree	<p>Issue: An empty fabric is produced in the FM tree during segmentation/merge.</p> <p>Workaround: Segment/merge switch nodes one at a time, thereby not causing an entire FM tree segmentation.</p>
Fabric switches undiscovered	<p>Issue: Fabric switches are in blue, undiscovered state for approximately 4-5 minutes when four simultaneous fabrics are discovered, one immediately after another.</p> <p>Workaround: Wait for the discovery process to complete.</p>

Open issues for Fabric Manager 4.4.x

Table 4 lists defects to be addressed in a subsequent release of Fabric Manager.

Table 4 Fabric Manager 4.4.x open issues

Open issue summary	Workaround
Memory leak in FMServer process under Windows has been seen once while Port Stats feature is enabled.	If FM Server is running under Windows and PM is enabled, monitor the memory periodically. Depending on how many ports are being monitored and how much memory the server has, will determine how frequently the memory should be monitored. Also, set up a Call Home configuration to send out Server Alive messages, to make sure the FM Server is alive.
SCAL FM: Fabric Manager server restarts if Port Stats and End to End monitoring are enabled and then try to create Change Management profiles with all change monitoring options checked.	Restart Fabric Manager client after server restarts and retry. Alternatively, don't select the "Switch Configuration File" checkbox when creating Change Management Profile
Memory leak in Fabric ManagerServer process under Windows has been seen while End-to-End feature was enabled	Monitor the memory usage. If it is growing, then restart the server when the memory used is close to the limit. If the server runs out of memory, it will restart.
May occur if the switch reboots or the webserver restarts on the switch during the time when Fabric Manager is waiting for a response to its' http request.	The cursor changes to an hour glass but Fabric Manager is still responsive. User can close and restart Fabric Manager to reset the cursor.
FM:2191: SCSI Device names are missing from Devices and Device Ports View when devices are connected to non-launch switch when launch switch is running Fabric OS v4.2.0.	Use a pre-4.2 FOS as a launch switch to see SCSI Inquiry names in Device and Device Ports view in Fabric Manager. No workaround exists if the fabric consists of only FOS 4.2 switches.
Fails to display a warning dialog that shows what parameters are not downloadable during config download to switches	Download these config parameters to the switch using 'configdownload' command via CLI or through Web Tools.

Table 4 Fabric Manager 4.4.x open issues (continued)

Open issue summary	Workaround
Fabric Manager Server may crash under Windows with a message that JavaService is being closed.	If Fabric Manager Server crashes, Windows Services will by default automatically restart the server process.
Port status for 'Unknown' (ethernet unreachable) switches and 'Missing' switches doesn't reflect the switch status.	User just needs to be aware of the fact that for unreachable switches, only the switch icon will change color, and not the port/card icons.
Various anomalies when there are missing switches in a fabric.	Delete the missing switch and refresh this fabric. User would need to take a new baseline for Change Management to avoid notifications regarding ISL changes in the fabric after the missing switch is removed from Fabric Manager.
Target to Target EE Monitor was displayed under the Not Set tab after enabling E2E feature on Edge Fabric that is importing devices.	Define the same role for imported device in edge fabric as well as in the original fabric.
Occasionally Fabric Manager Client displays wrong information (FOS versions, duplicate IP addresses).	Restart Fabric Manager Client.
Fabric Manager Server under Windows crashed due to API Exception after having Port Stats enabled for almost 72 hours.	Running Fabric Manager Server as background process (which is by default) Windows will restart the process if it terminates.
Client hung and failed to respond after running for several days with End-to- End Monitoring turned ON.	Terminate the client from Windows task manager, and re-start.
Domain ID format in Device Ports table isn't correct after device is moved; attempt to sort by Domain ID fails.	Click any other tab to change the view, and click Device Ports tab. All Domain IDs will be displayed correctly.
During LSAN creation, an incorrect warning may be displayed. This warning states that the effective zoning config alias is different than the defined zoning config alias, even though the aliases are identical.	When aliases are present in the zoning configuration, Fabric Manager displays this false warning message even when the 'Effective' configuration is the same as the 'Defined' zoning configuration. User can verify from CLI or WTs that both 'Effective' and 'Defined' configurations are the same and click 'Yes' to continue with LSAN zone creation.

Closed issues in Fabric Manager 4.4.x

Table 5 lists defects that have been closed since the last Fabric Manager release, version 4.2.x.

Table 5 Fabric Manager 4.4.x closed issues

Fixed issue	Symptom
Cannot bring up Security Admin in a 2+10 Security Enabled Fabric.	Error code -221 is returned if fabric has recovered from an unstable (reconfiguring) state upon bringing up Security Admin.
Fabric Manager experiences repainting problem on Manual Refresh.	Client left running and monitoring for an extended period as in an overnight monitoring session.
SCSI Device names are missing from Devices and Device Ports View when devices are connected to non-launch switch.	User only needs to be aware of this issue when running Fabric Manager 4.1.1.
When using the SupportShow command for multiple switches at least one v3.x switch will fail.	Use SupportShow command for only one v3.x switch at a time.
Merging two secure fabrics fails intermittently with version time stamp reset.	Time stamp in error.
Change Management gives API error when collecting Switch Config for 2.6.x FOS switches.	Occurred when setting up a profile for a fabric with 2.6.x as a launch switch.
Change Management: Only defined zoning objects captured in snapshot, enabled zoning objects are not.	If fabric contains enabled zones and config that are different from defined zones and config, then Change Management snapshot will only contain information about the defined ones, not the enabled ones.

